

Industrial Productivity

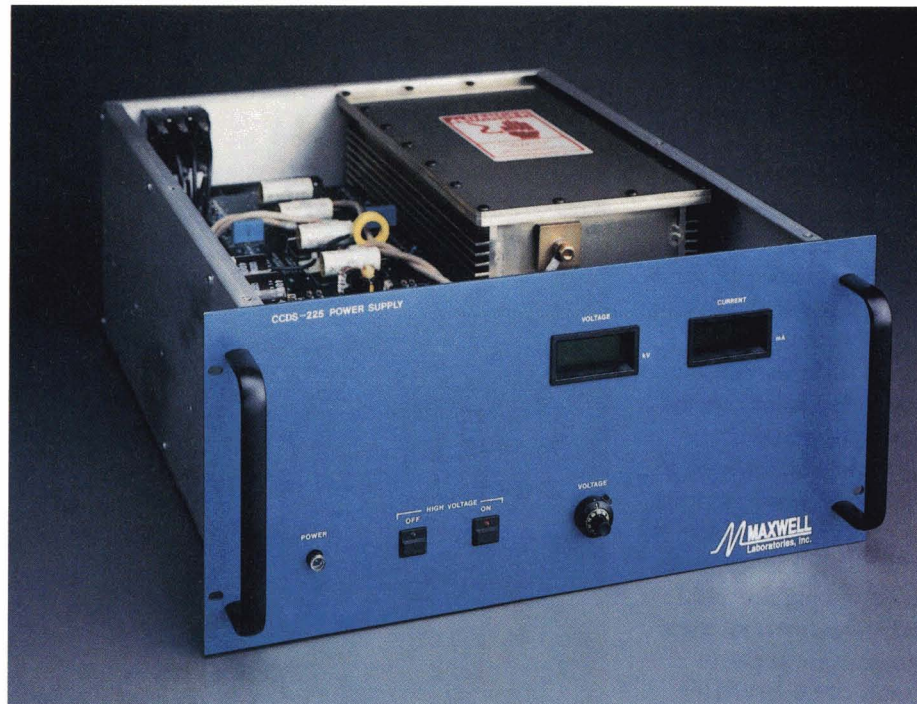
## Power Supply

*The power  
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**At right** is a Maxwell Model CCDS-225 Capacitor Charging Power Supply, one of 63 models in the commercial CCDS series produced by Maxwell Laboratories, Inc., San Diego, California. The series is named for NASA's Centers for the Commercial Development of Space, which are competitively selected consortia of industrial firms, universities and government organizations established to accelerate development of technology for both ground-based and space-based commercial applications.

The CCDS series was co-developed by Maxwell Laboratories and one of the 16 CCDS, the Center for Commercial Development of Space Power, Auburn University, Alabama. Maxwell will share with the Auburn center revenues from sales of the CCDS series.

The first commercial spinoff from the CCDS program, the power supplies are rectangular units about the size of a stereo receiver. Their job is to transform and condition large voltages (up to 50 kilovolts) to charge capacitors used in such devices as x-ray sources, medical accelerators, radar and microwave communications equipment, and industrial lasers used for marking, cutting and welding operations. The system is lighter, more reliable, more compact and more efficient than existing systems that do the same job, its developers



say; these features are critical to industrial, medical and space applications.

Work began on the system in 1988, originally conceived as a lightweight high voltage power supply to charge capacitors used mainly in NASA space lasers, which perform guidance, communications and weather monitoring functions. Early in the program it was recognized that there was a need and a market for an efficient capacitor charging power supply in terrestrial applications. By the fall of 1988, the Maxwell/Auburn team had developed several prototype designs for the commercial unit. The design was finalized in February 1989 and in May of that year an engineering prototype confirmed product performance. Production for the commercial market began in 1990.